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ABSTRACT

The College of Lake County's 3-year National Workplace Literacy Program (1994-1997) contributed to economic development by meeting companies' changing educational and production needs as they fluctuated and met new challenges for global marketing and improvement. It assessed 883 employees at 8 business sites with customized assessment tools and instruction. Each assessed learner developed a Career Development Plan (CDP) to assist him or her in selecting and working toward career goals. A workplace curriculum was developed as a broad outline to be implemented in a manufacturing or pharmaceutical business. Instructor training was a continuous process that consisted of staff development workshops, mentoring, newsletters, electronic mail messages, and self-study workplace training modules. An Individualized Educational Plan was developed as a tool in identifying needs and interests of learners. The objective of ensuring business involvement was met through establishment of the Business Partner Advisory Council. For an ongoing comprehensive evaluation, Kirkpatrick's four-level model was chosen and customized to measure instruction, curriculum, and program effectiveness. Staff and business partners participated in presentations and learning seminars to disseminate promising strategies and project outcomes. A plan for continuing educational opportunities within each company was finalized by year three. (Samples, materials, and other information accompany the appropriate objective.) (YLB)

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ED 411 473

NATIONAL WORKPLACE LITERACY PROGRAM
U. S. Department of Education
1994 - 1997
GRANT # V198A40173

FINAL REPORT

College of Lake County
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INTRODUCTION
National Workplace Literacy Program -- Final Report

This final report is a concise overview and analyzation of the ten objectives written in the 1994 grant application, implemented throughout the three year period, and evaluated on a formative and now a summative basis. These ten objectives serve as the basis for all operations, philosophies, and curriculum of the grant.

Keeping with the U.S. Department of Education's intention of having "model" grants for this three year cycle, all our educational materials, instructional approaches, staff development, learner involvement, and business partner relationships have followed this charge.We envisioned and created " models" in every phase of planning, implementing, and evaluating the outcomes, objectives, and activities of the grant.We have seen transfer of the grant's ideas, instruction, and teachers to other educational departments as well as to other businesses and programs.

Our main curriculum, *Building Knowledge in the Workplace and Beyond*, has been distributed nationally and internationally with receipt of positive feedback and gratitude for its easy implementation, accessibility, and impact on other workplace programs. Its innovative educational approach and format makes it a unique contribution to the workplace literacy field.

Serving and being accountable to learners and the businesses has always been our primary goal. We have effectively met this challenge and goal as is demonstrated in the prose and accompanying charts of each of the reported ten objectives. We have monitored the learners from assessment, in determining educational and career goals, with class attendance, in evaluation processes, through identification of future educational paths. We have worked closely with the businesses to conduct needs analysis, to assist in workplace curriculum development, to provide instruction which best accomodated production schedules, to submit reports on instruction and progress, and to disseminate best practices at local, regional, and national conferences. The businesses have been directly involved in every aspect of our educational program and have served as models to each other and other regional and national businesses.

When comparing our anticipated numbers and projects to the actual, the grant surpassed its original plan and accomplished far more than it stated. We said we would serve **282** employees (unduplicated) and ended up serving **817** employees. This reflects a 190% increase in our targeted learner number. This is also true of the anticipated **568** (duplicated)employees and the actual **1,147** employees; an increase of 102%. We also increased the original number of companies that the grant served from six to eight and developed eight major curriculum products in addition to the main workplace curriculum in order to better serve the learner and company.

The grant was successful in following the college's goal of contributing to the economic development of Lake County by meeting the changing educational and production needs of each company as they fluctuated and met new challenges for global marketing and improvement.

GRANT OBJECTIVES

Objective 1
Conduct a comprehensive skills assessment; 100% of the identified hourly workforce at each of the partner industries

Objective 2
Develop a Career Development Plan for each assessed worker who will participate in a project class

Objective 3
Develop a workplace literacy curriculum

Objective 4
Implement an intensive program of instructor recruiting and training

Objective 5
Offer 51 workplace literacy classes over three years

Objective 6
Develop an Individualized Educational Plan

Objective 7
Insure business involvement in the project

Objective 8
Carry out an ongoing, comprehensive evaluation of the grant project

Objective 9
Disseminate promising strategies and other project outcomes

Objective 10
Develop with each of the partner industries a plan for continuing their instructional programs beyond the funding cycle

OBJECTIVE 1

Conduct a comprehensive skills assessment of 100% of the identified hourly workforce at each of the partner industries.

The Process

An assessment process was specifically designed to meet the needs of the National Workplace Literacy Grant. The following is an overview and detailed description of the type of interaction that took place with business partners, instructors, and learners throughout the grant period.

(See the attached *Process* sheets)

Types of Assessment
Both standarized and customized tests were used to assess hourly workers.

Standarized
The standarized tests and rationale for using them are as follows:

English as a Second Language Oral Assessment (ESLOA):

This test is designed to place speakers of other languages in appropriate levels and to provide a brief, efficient measurement of their ability to speak and comprehend English. This is an effective tool for many hourly workers served by the grant, since low reading and writing skills hinder them from being assessed appropriately by other placement instruments.

Comprehension English Language Skills Assessment (CELSA):

This test is useful for intermediate to high level users of English. It is a grammar-based reading assessment. CELSA is useful since it assesses the ability to comprehend natural and authentic language, which workplace employees may be more familiar with.

Continued ➡

The Test of Adult Basic Education (TABE):

TABE is designed to measure the reading, mathematics, language and spelling skills of adult learners. It contains language and content appropriate for adults and meets rigorous statistical requirements, providing a defined gauge that allows for accurate targeting of individual needs. Our grant also uses the TABE Work-Related Problem Solving test that covers reading, math, problem solving techniques, critical thinking, and decision-making skills. This provides measurement of skills highly valued and needed by companies.

Customized

In addition to the standarized assessments above, our grant also uses customized tests that are particularly useful to our business partners.

Workplace ESL Test

The Workplace ESL Test was designed and developed for the National Workplace Literacy Program to meet the needs of English as a Second Language learners. It assesses familiarity with workplace vocabulary, policies and documents, as well as signs, and symbols through reading and writing. It uses an audio tape, emphasizing the importance to ESL learners of measuring listening skills. It is tailored to our learners needs and workplace environment.

Blueprint Reading Test

The blueprint reading test was created to measure the learner's ability to understand the basic principles of blueprint reading. An authentic blueprint is used for assessment purposes. The assessment consists of reading the company document, answering questions related to the company document, and making appropriate measurements and calculations based on the data given. The test proved so successful that other companies are now using it.

Continued ➞

RESULTS

The grant has assessed a total of 883 hourly employees at the eight business sites through the grant's instructional program. The responsibilities, activities, and products delineated in the overview and description of the assessment process have proven to be vital for gathering data for reporting progress and pertinent information to learner, supervisor, employer, and funding agencies. It has also served as an effective form of accountability and communication with instructors, learners, and business personnel throughout a given class session.

Assessment scheduling was sometimes affected by employee work shifts, though placement and pre/ post testing generally covered any gaps, providing the Assessment Specialist sufficient opportunity to collect pertinent data.

Essential to the grant's instructional program was the development and implementation of customized assessment tools and instruction. These were created by identifying learner needs within the company, collecting authentic materials, and then tailoring assessment tools and instruction to reflect the workplace environment of the learners. Thus, an effective model for workplace education was created, meeting the goals and expectations of our companies as well as satisfying the immediate needs of the learner.

THE PROCESS

PART I Overview

A. Communicate with Business Partners and Sites

B. Administer Placement Test

C. Maintain and Develop Student Records

D. Create a Master Calendar for all Assessment Activities

E. First Day of Class Activities:
- *Database Form
- *Administer Pre-Test

F. Create Reports for Instructors

G. Last Day of Class Activities:
- * Redistribute Database Form
- * Administer Post-Test
- * Handout Teacher Evaluation Forms
- * Review I.E.P. and Short Term Goals

H. Analyze Data

I. Create Reports for Companies and Grant

J. Disseminate Information to Educational Providers/Businesses, Conferences and Meetings

DESCRIPTION OF THE PROCESS

PART II

A. *Communicate with Business Partners and Sites*

Communicate with partners via telephone, letters, faxes, etc. regarding class list information and scheduling for assessment.

Attend all supervisor meetings and focus groups.

B. *Administer Placement Test*

Once a class has been established, the assessment specialist must arrange a time with the business partner to conduct a placement test for any new students who will be attending the class.
(See description, Part II)

C. *Maintain and Develop Student Records*

After a placement test has been conducted, a student file is created for each individual with a record of their personal information, including all assessments, I.E.P., career development forms, samples of student work, and other necessary paperwork.

D. *Create a Master Calendar for all Assessment Activities*

A master calendar is created and distributed with the purpose of keeping the NWLP staff, instructors and other college departments (Ex. CEED) informed of assessment dates and availability for assessment if they should need my assistance. (See sample, Part III)

E. *First Day of Class Activities*:

*Database Form

The National Workplace Literacy database form is used to collect student profile information for enrollment. It is also given to students as one way to identify abilities as well as respond to and interact with written materials. Only front page information is filled in at the beginning of the session. (See sample, Part III)

*Administer Pre-Test

Once a start date has been established, the assessment specialist visits the partner company and assesses the students on the first day of class with an instrument that is appropriate for the instruction that will be given. (See description and samples, Part II)

F. *Create Reports for the Instructors*

All pretests are graded and all scores are recorded and put into a binder for that individual class and year.

Pretest assessment scores are returned to the teacher for reference, along with recommendations and/or suggestions for instruction based on the results of the assessment and the Workplace Literacy Curriculum objectives for that particular class.
(See sample, Part III)

G. *Last Day of Class Activities*

* Redistribute Database Forms

The National Workplace Literacy database form is redistributed to each student. The back page, which contains questions regarding skills they may have gained from the class, is filled out and used for reporting purposes. (See sample, Part III)

* Administer Post-Test

All classes will be given an appropriate post-test assessment.

By the last day of class, instructors will receive a copy of the pre and post test scores so they can share the information with their students.

* Handout Teacher Evaluation Forms

Students will fill out a teacher evaluation form.
(See sample, Part III)

* Review I.E.P. and Short Term Goals

The assessment specialist will review the I.E.P. and short term goal information the student put down at the beginning of the session. The purpose is to encourage students to follow through with their educational goals.

H. *Analyze Data*

The data collected from the various classes during the course of the session will be used to create graphs to show the short term impact the class had on the educational growth of the student (ex. pre & post test results). (See samples, Part III)

Data collected from the Individualized Educational Plan and Career Development Forms will also be used to create graphs to show the interests and goals of the student population we are serving. (Sample)

Provide any necessary information from student files or on student progress to the NWLP staff when needed.

I. *Create Reports for Companies and Grant*

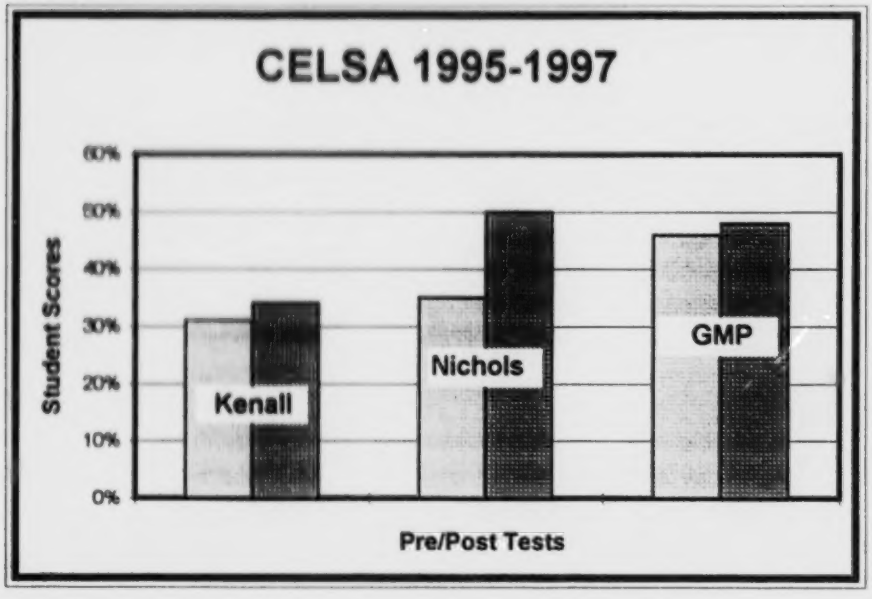
Present an overall view of the impact the National Workplace Literacy Grant classes have had on the employees who participated in the program based on the data gathered from student files. (Specific information regarding any individual student will not be used during this presentation.)

J. *Disseminate Information to Educational Providers/Businesses, Conferences and Meetings*

Conduct presentations at conferences when necessary, especially when applicable to the role of assessment at CLC and any assessment products of the NWPL grant.

NATIONAL WORKPLACE LITERACY PROGRAM

Three Year Pre/Post Comparison



OBJECTIVE 2

Develop a Career Development Plan for each assessed worker, who will participate in a project class.

In years one to three each assessed learner developed a Career Development Plan to assist him or her in selecting and working toward career goals. The Plan took into consideration learners' test scores, company career possibilities and options within the company on a short and long term basis. The Plan was presented by the Assessment Specialist and worked out with learners in conjunction with the Career Development Plan form. Learners were later contacted to monitor progress and to provide encouragement. Referring back to the Plan was helpful in identifying skills that could be learned or enhanced to make goals more obtainable. Learners found this proced plan very beneficial.

Learners were asked which short-term and long-term goals were important to them. The numbers below indicate choices of goals and the comparisons between years.

Year 1		
Short term goals		
	Move into a different position within department/company	3
	Expand skills necessary to work in other areas within the company	5
	Take training classes in a specific area	0
	Get a promotion	16
Long term goals		
	Move into a different position within department/company	1
	Expand skills necessary to work in other areas within the company	0
	Take training classes in a specific area	0
	Get a promotion	4
Year 2		
Short term goals		
	Move into a different position within department/company	0
	Expand skills necessary to work in other areas within the company	0
	Take training classes in a specific area	0
	Get a promotion	3
Long term goals		
	Move into a different position within department/company	0
	Expand skills necessary to work in other areas within the company	0
	Take training classes in a specific area	0
	Get a promotion	1

Continued →

Year 3

Short term goals

Move into a different position within department/company	28
Expand skills necessary to work in other areas within the company	35
Take training classes in a specific area	33
Get a promotion	33

Long term goals

Move into a different position within department/company	32
Expand skills necessary to work in other areas within the company	43
Take training classes in a specific area	47
Get a promotion	40

Certain factors may explain these figures. Many classes contained a mixture of native and non-native English speakers, which may have resulted in under-representation of some groups of learners. Variances in yearly results can be explained in that after the second year record-keeping was no longer confined to NWLIS reporting. It then became possible to directly collect and monitor pertinent data.

Responses may show that increased confidence level resulting from learning success stimulated the desire for skill expansion. In the first year some learners may have chosen promotion as a goal without considering how one becomes promotable. By the third year, however, accumulated learning for some made movement within the company a strong possibility. It was demonstrated that presentation and completion of the form stimulated clear, concrete thinking about the future for our learners, which is the first step to career development.

CAREER DEVELOPMENT PLAN
National Workplace Literacy

Class:_____ **Date:**_____ **Company:**

Please check the boxes for each category that best describe your goals.

SHORT TERM GOALS (less than one year)

☐ Improve educational skills needed in your present job.

(Please circle the topics that most interest you.)

- problem solving
- math
- reading
- English language skills

☐ Move into a different position within your department and/or company.

☐ Expand skills necessary to work in other areas within the company.

☐ Take training classes in a specific area.

☐ Get a promotion.

LONG TERM GOALS (more than one year)

☐ Improve educational skills needed in your present job.

(Please circle the topics that most interest you.)

- computer skills
- problem solving
- math
- reading
- ESL
- communication skills

☐ Move into a different position within your department and/or company.

☐ Expand skills necessary to work in other areas within the company.

☐ Take training classes in a specific area.

☐ Get a promotion.

☐ **Start my own business. (List the type of business)**

_____

What actions do you think are necessary in order to accomplish your long term goal/goals? Please write down your ideas on the lines below.

Please write down your ideas on the lines below.

_____

_____

RECOMMENDATIONS:

Specific classes

- **GED**
- ESL
- take special work related courses (ex. computers)
- continue education at a community college
- problem solving
- math
- communication skills

OBJECTIVE 3

Develop a workplace literacy curriculum

The workplace curriculum, *Building Knowledge in the Workplace and Beyond: A Model National Workplace Literacy Curriculum*, was developed in year one, piloted and revised in year two and fully implemented and disseminated in year three. The curriculum was developed as a broad outline to be implemented in a manufacturing or pharmaceutical business. The curriculum was developed for use by the National Workplace Literacy Program partners in Lake County, Illinois but can easily be implemented in any manufacturing or pharmaceutical environment. The intent is to be a model that can be tailored to each company and/or group of learners. The central concept is that learning in a workplace classroom is most effective when it is experiential, relates to the employees' and employers' real needs, and is a result of an ongoing, collaborative examination of the employees' everyday reality. This curriculum supports the view that the employers and employees must be involved in determining both the content and direction of the educational experience.

In addition to the workplace curriculum several other publications were developed as well. The *Instructional Guide for Abbott Skills Enhancement Classes*, *Basic Blueprint Reading*, *Enhancing Instruction Through Technology*, *Curriculum Adaptation Project*, *Partnering in Workplace Education: Supervisors Meetings*, and *Teachers Assisting Teachers* were created as a direct response to needs expressed by National Workplace Literacy Program partners and teachers.

The *Abbott Instructional Guide* was developed to blend adult basic education skills and work-related foundation skills with Abbott documents. Blueprint reading was developed to directly meet a need expressed by a business partner whose organization had evolved to the point where all employees needed to interact in some manner with company blueprints. It is now being used by all partners. *Enhancing Instruction Through Technology* was developed to supplement classroom instruction through educational computer software programs. The manual can also be used as an alternative to classroom instruction for self-directed learners or when production constraints do not allow for scheduled workplace classes.

Continued ➡

The *Workplace Curriculum Adaptation Project* was implemented to facilitate revision of the workplace curriculum and increase its effectiveness. *Partnering in Workplace Education: Supervisor Meetings* were developed to solicit input of the supervisors who work directly with the learners attending classes. The information was then given to instructors to present more effective and relevant instruction. The workshops provided direct dialogue with the supervisors regarding the content of the workplace classes as well as providing them with information on how to help the employees transfer their classroom learning to the job. The *Teachers Assisting Teachers* manual was created to provide part-time workplace instructors with a link to their peers and the institution while helping them develop stronger instructional methodologies.

The objective of developing a workplace literacy curriculum was not only accomplished but surpassed because additional materials were created to meet identified needs of the businesses and their workers.

See **(Publication List)** for a description of all workplace materials that are published through ERIC Digest.

PUBLICATIONS DEVELOPED BY THE NATIONAL WORKPLACE LITERACY PROGRAM

Building Knowledge in the Workplace and Beyond: A Model National Workplace Literacy Curriculum

Developed to guide and enable instructors of workplace students to create meaningful classroom experiences so that students can enhance basic skills and transfer these skills to their jobs, personal lives, and communities. The curriculum is divided into four parts: The Introduction, The Guide, The Courses, and The Appendix. It is generalized across manufacturing and pharmaceutical workplaces allowing the instructors to gather information that will enable them to make their courses specific to each workplace.

The Instructional Guide for Abbott Skills Enhancement Classes Curriculum

Integrates adult basic education learning objectives, Abbott job skills, and work-related foundational skills designed to enhance the skill areas of reading, writing, oral communications, mathematics, and problem solving. The guide is specifically designed for adult learners up to a 10.9 grade level. It is an outcome based program consisting of the skill groups to be taught, the context, learning objectives, and desired outcome. The guide provides for increasing complexity of skills and measurable outcomes. The skills and outcomes are generalizable across all workplaces.

Basic Blueprint Reading Curriculum

Designed to familiarize employees with the basic symbols and principles of company blueprints. Emphasis is placed on review of basic skills using decimal numbers. Actual company blueprints are used in the learner activities along with digital calipers, rulers, and protractors. Learners identify basic view, meaning of lines, basic dimensioning, terms, symbols, and measurement. A pre/post assessment is provided to measure learner gain.

Enhancing Instruction Through Technology Curriculum

Integrates commercial educational software programs into the workplace and adult basic skills curriculum. Twelve programs are reviewed and learning objectives with suggested activities are identified. A detailed description of the program, its organization, an evaluation, and sample exercises are provided. The manual is designed for in class instruction as well as self directed learning.

Curriculum Adaptation Project
Manual

Designed to adapt the Building Knowledge in the Workplace and Beyond curriculum in order to improve the usefulness and application of information in the original curriculum. The objectives of the project and manual demonstrate an effective model of eliciting information on curriculum usage, usefulness of the theory and application, evaluate teacher suggestions and comments, and modify the curriculum as needed. A set of checklists, questionnaires, and interview questions are included; interviews, meetings, and discussions are summarized and reported.

Partnering in Workplace Education: Supervisors Meetings
Manual

This manual is a compilation of activities and ideas for educational providers to use when working with company supervisors of learners involved in workplace basic skills classes. The meeting are instrumental in facilitating the transfer of instruction from the classroom to the workplace. The activities demonstrate how supervisors can more effectively interact with learners as they participate in educational programs. Included in the activities are sections on what you learn, how you learn, how and what you communicate, and what you transfer.

Teachers Assisting Teachers
Manual

Created to address staff development issues unique to part-time instructors teaching in adult education and workplace settings. The program supplements traditional forms of staff development with a professional partnership/mentoring relationship. The activities are designed to facilitate the sharing of philosophies, ideas, strategies, styles, and techniques among part-time instructors in order to foster their growth as professionals. The manual's detailed process includes questionnaires, schedules, professional survey, meeting agendas, and evaluation instruments.

Authentic Assessment: Getting Started
Manual

This manual is for instructors of ESL, ABE, and workplace Literacy programs. It focuses on the presentation and explanation of the following three questions: What is authentic assessment? What are the steps in planning authentic assessment? How is the learner involved? Also included are many practical and effective assessment forms for all subject areas and levels of learner.

Step One: Essential Oral Skills for Adult ESL Learners
Manual

Designed as a beginning point for developing essential oral skills for adult ESL learners. It provides activities for practicing critical communication skills. These skills can be used by adults in their community, workplace, and classroom. The manual is divided into four sections: All about me, work, health, and friends and co-workers.

OBJECTIVE 4

Implement an intensive program of instructor recruiting and training

Recruitment

In years one to three instructors were recruited in a variety of ways. Classified advertisements were placed in the Chicago Tribune and in all widely-circulated local newspapers. Information was posted at local universities, adult education resource centers, and conferences. Also, networking techniques were employed to search for the most competent instructor that matched the grant's philosophy. Teacher recruitment has been an on-going and challenging process with the allowance of only using part-time instructors. However, recruitment became easier as workplace teachers shared their successes and new educational experiences with adult education teachers and both departments began to combine opportunities and positions.

Training

Training was a continuous process. It consisted of staff development workshops, mentoring, newsletters, E-mail messages for instructors (TESL-L), and self-study workplace Training Modules. Teacher observations, follow-up communication, and on-going access for instructors with needs or questions were also part of the training.

Workshops were presented based on classroom observation, instructor requests, workplace issues, and information derived from reports. Workshops in Year One focused on instructors becoming familiar with workplace teaching and adult-appropriate methodology. For example: *From ESL to Workplace ESL Is It for You?; The Conversion Process: Materials to Instruction; Photographs and Workplace Instruction; Becoming Involved in the Observation Process;* and *Introduction to Problem-based Learning.*

In Year One a 15 module *Workplace Literacy:Teacher Training* project was finalized and offered to instructors as alternative professional development. Many teachers participated in this education opportunity and found it effective in learning about teaching in the workplace. See attached sheet ***(Self Study Packets:Workplace Literacy Teacher Training)*** which describes the packets and topics. The 15 modules, grouped in four categories, are also available in ERIC Digest.

Continued ➡

In Year Two staff development was similar to Year One but also expanded to include familiarization with and involvement in the newly created ESL Workplace Test, the Curriculum Adaptation Project, and a Teacher Assisting Teacher Mentoring program. *The workshops were: Introducing the CLC Workplace ESL Test; Using Learner-Generated Narratives in the Workplace; Teacher Assisting Teacher/Mentoring (a series of three); Professional Development Made Easy; Teacher/Ethnographer in the Workplace; Knowing your Workplace Learner; Workplace Curriculum: It's a User Friendly Reference for Classroom Success; Goals, Objectives, Activities--Teaching by Objective & Customizing Instruction; Customizing Workplace Instruction: Rationale and Materials; Problem-based Learning for Part-time Instructors;* and *Computer-generated Authentic Curriculum: A Learner's Eye View.* See attached sheet for discriptions (***Staff Development Workshops***).

The Curriculum Adaptation Project was created to involve 12 workplace instructors in the revision of the curriculum. This provided them the opportunity to: 1) provide necessary feedback about the appropriateness of learning objectives and outcomes, 2) submit their workplace activities for inclusion in the curriculum, and 3) reflect on their teaching and the workplace program.

The *Teachers Assisting Teachers* program and manual was a unique opportunity to promote reflective instructors, create a sense of community amongst part-time instructors, and enhance professional skills and knowledge. Fifteen instructors participated in the program, with all expressing a demonstrated and improved sense of professional attitude and instruction.

In Year Three staff development emphasis was on multi-level instruction and authentic assessment. The workshops presented were: *Incorporating All Five Basic Skills into Instruction; Providing Best Practices for Multi-level Classes; Reporting Appropriate and Academic Comments; Identifying Measurement Instruments and Scoring Criteria;* and *Assessment.* Also, a series of five *Problem-based Learning Workshops* was provided.

Over forty instructors were involved in our program. The diversity and continual offerings of professional development/training has greatly impacted the success of workplace instruction and the effectiveness of the entire grant program.

SELF-STUDY PACKETS : WORKPLACE LITERACY TEACHER TRAINING

In order to : (a) meet the needs and schedules of the part-time instructors and (b) train inexperienced adult basic education teachers in workplace literacy and competency-based instruction, a modular staff development project is offered. Over a period of two to three weeks, an instructor contracts with the National Workplace Literacy Program to complete the packet (s) on his/her own, according to the specified requirements, and then meets with the grant staff for evaluation and discussion. The packets can be completed in approximately eight hours, done in either a sequential or independent manner.

Topics for the 15 modular packets are:

1. The Context of Workplace Literacy: The Workplace
2. The Context of Workplace Literacy: The Learner
3. The Context of Workplace Literacy : The Instructor
4. Relate Workplace Literacy Programming to Needs of Business and Industry
5. Develop a Training Plan and Performance Objectives from the Job Analysis
6. Create Literacy Resources Using Workplace Materials
7. Improve Teaching Effectiveness Through Planning and Evaluation
8. Employ Strategies for Communications Instruction
9. Employ Strategies for Reading Instruction
10. Employ Strategies for Mathematics Instruction
11. Employ Strategies for ESL Instruction
12. Manage Instruction
13. Facilitate Tutoring/Mentoring in the Workplace
14. Assess Learner Performance
15. Employ Strategies for Individualizing Instruction

Packets follow this general format:

- Introduction consisting of an explanation of the topic and a list of objectives to be accomplished by those completing the packet.
- A minimum of three readings on the topic.
- A structured reflection on the readings and the learning experience suitable for individual or small-group work.
- A structured activity promoting application of the concepts or skills to be learned.
- Evaluation guidelines appropriate for self-evaluation of the applied learning activity or for peer review in small groups.
- An annotated bibliography which lists further readings on the topic.
- An evaluation sheet on the entire packet to be filled out upon completion by the part-time instructor and by a grant staff member.

A. FROM ESL TO WORKPLACE ESL: IS IT FOR YOU?

Participants will be presented, through a variety of methods, the differences between community and workplace education and what the implications for teaching are. Questionnaires, partner sharing, discussion of charts explaining classroom vs. workplace ESL, and viewing of video-taped instruction interviews, will highlight the main differences in responding to the workshop's title question.

TEACHER/ETHNOGRAPHER IN THE WORKPLACE

The teacher/ethnographer's task is to gather data, through photography and interviews, from as many points of view as possible. The goal is understanding the whole, interpreting the data, and applying it in the classroom. This ethnographic task will provide information about both the context and form of classroom behavior, helping teachers customize curriculum, and find more effective teaching methods.

KNOWING YOUR WORKPLACE LEARNER: CHARACTERISTICS AND INSTRUCTION

This workplace will provide an opportunity for instructors to heighten awareness of the workplace adult learner and its implications for instruction. First, the participants, through interactive group exercises, sharing, and reflecting, will identify characteristics of the adult learner. Second, the participants will recognize and determine the various factors that need to be considered in effective workplace instruction.

B. THIS IS NO ORDINARY WORKPLACE CURRICULUM: IT'S A USER-FRIENDLY REFERENCE FOR CLASSROOM SUCCESS

This competency interactive workshop will familiarize you with the National Workplace Literacy Program's model workplace curriculum. Through group activities you will discover an effective, no-nonsense approach to workplace instruction, you will receive information for quick and easy reference, simple, yet complete, advice to ensure your teaching success, and real workplace examples to help apply concepts. This workshop will take you step by step through the curriculum guide and course section

GOALS, OBJECTIVES, ACTIVITIES - TEACHING BY OBJECTIVE: CUSTOMIZING INSTRUCTION

This workshop will explain and demonstrate methods to approaching the how and why of using goals, objectives, and activities in the adult learner classroom. Participants will be actively engaged in multiple tasks that illustrate the need to integrate all three components during lesson planning and instruction and constantly be reflecting on WHY they do what they do.

1994-97 College of Lake County National Workplace Literacy Program

CUSTOMIZING WORKPLACE INSTRUCTION: RATIONALE AND MATERIALS

This workshop will address the questions of why and how to customize situations and materials in the workplace. The participants will work through case studies for workplace customizing, will interact with adult education textbooks to customize for the workplace, and share examples and concerns working through the customization for the workplace.

PROBLEM-BASED LEARNING WITH PART-TIME INSTRUCTORS

Problem-based learning is an innovative, instruction approach that helps learners identify and work with ill-structured problems that reflect real-world problems. It is an active, all skills integrative, knowledge-based method of instruction. You, as instructors, will experience this approach and then discuss ways it can be used in the classroom.

COMPUTER-GENERATED AUTHENTIC CURRICULUM: A LEARNER'S EYE VIEW

This workshop will share a process for creating learner-generated vocabulary and language materials through the use of disposable cameras and image-scanning with IBM or MacIntosh software. The demonstration will describe how teachers and learners work together to design and develop the curriculum, from vocabulary to the representation of meaningful contexts for language/workplace study.

C. *INTRODUCING: THE CLC WORKPLACE ESL TEST*

This workshop will provide the opportunity for all workplace instructors to become familiar with this new test. You will be presented with information in the development process such as questions to ask while developing a test, its features and components, and the skills covered by the test. Next, you will actually take the test and then, provide constructive feedback for changes and adaptation.

BECOMING INVOLVED IN THE OBSERVATION PROCESS

The grant staff has created a new instructor observation instrument and your feedback is needed. You will use the instrument to evaluate a workplace instructor recorded on videotape, and then discuss ways to improve the instrument. Teachers will also create a list of "Tips for the Observation Team" that recognizes this cooperative process and its importance.

1994-97 College of Lake County National Workplace Program

OBJECTIVE 5

Offer 51 workplace literacy classes over three years

The original grant objective was to offer 51 workplace classes over three years. At the end of the first year of the grant, the U. S. Department of Education cut the national workplace grant budget by one third for the final year. Even with a decrease of over $100,000 in operating funds, the grant was able to offer 47 workplace literacy classes to seven participating business partners. In addition, through contractual services, the grant offered 30 classes to Abbott Laboratories by recruiting, hiring, and providing staff development for instructors, as well as developing curriculum for the contract.

A list of the grant classes provided over the three year period follows:

Year One	Year Two	Year Three
9 ESL	10 ESL	8 ESL
1 Problem Solving	3 Math	2 Problem Solving
2 Math	1 Blueprint Reading	1 Math
1 Communication Skills	2 Communication Skills	3 Supervisor Workshops
13	4 Supervisor Workshops	14
	20	

Over the three year period a total of 817 unduplicated learners were served. This amount represents an increase of 190% above the target number of 282 learners. The duplicated number of learners served was 1147. Targeted number of classes to be held was 51. Due to a workforce reduction in two companies, production problems in one, and a change in how training is delivered in another company, only 47 classes were offered. Even with the constraints outlined above, the grant was still able to achieve 92% of its objective.

OBJECTIVE 6

Develop an Individualized Educational Plan

The Individualized Educational Plan was an effective tool in identifying needs and interests of learners participating in the National Workplace Literacy Program. Combined with the Career Development Plan, short-term and long-term educational and career goals were gathered, discussed, recorded, and used as a basis for linking learners to educational providers in their area as well as directing them to the appropriate courses available for their particular interests.

The sessions involved an initial student advising session in the form of personal interviews with the Assessment/Career Development Specialist. A second advising session solicited the student's point of view on the class and its content. Finally, a record of each I.E.P. and Career Development Plan was redistributed to the students in the program along with pertinent catalogue information with the purpose of encouraging them to pursue their education/career goals and interests. See attached sample of I.E.P. and Career Development Plan.

The charts represented on the following pages indicate the identified education interests of learners who attended classes through the National Workplace Literacy Program in years 1995, 1996, and 1997.

Year 1 (1995): I.E.P. information reported that 31% of the learners recognized a need to gain more basic skills as well as increase their proficiency in English.

Year 2 (1996): Due to learner interest in acquiring greater job skills, two additional options were included in the I.E.P.: Occupational Certification and Job Training. 40% indicated a desire to increase their skills in these two areas. Basic skills increased from 31% in 1995 to 38% in 1996.

Year 3 (1997): Learners indicated a greater desire to acquire computer related skills as well as basic skills and English proficiency. Most classes given in 1997 were ESL classes which accounts for English proficiency being a greater percentage.

I.E.P.

INDIVIDUALIZED EDUCATIONAL PROGRAM

National Workplace Literacy Program

Class:_____ **Date:**_____ **Company:**

Name:_____

Address: _____

Street **City** **State** **Zip Code**

Phone Number: (_____) _____

In the future, do you plan to take any of the following courses? (Mark one on each line)

	YES	NO
A basic skills course in reading, writing, or math	_____	_____
An English course	_____	_____
A computer course	_____	_____
A GED course for the GED exam	_____	_____
Course to get an occupational certificate **If yes, what kind of certification?** _____	_____	_____
A job training course **If yes, what kind of training?** _____	_____	_____
Courses leading to a 2 year or 4 year college degree	_____	_____

WHO ENCOURAGED YOU TO ATTEND CLASSES? (Please circle or write down)

- **Supervisor** - **Manager**
- **Co-Worker** - **Other:** _____

SHORT TERM EDUCATIONAL GOALS

☐ **Improve educational skills needed in your present job.**

(Please circle the topics that most interest you.)

- problem solving
- math
- reading and writing skills
- English language skills
- GED

- Take college classes (list the types of classes)

_____

- Other (please list)

_____

LONG TERM EDUCATIONAL GOALS (more than one year)

☐ **Improve educational skills for your future goals.**

- GED
- complete an Associates degree
- complete a Bachelors degree

- Take classes at a technical school (list the types of classes)

_____

- Take college classes (list the types of classes)

_____

What actions do you think are necessary in order to accomplish your short educational term goal/goals? Please write down your ideas on the lines below.

_____

_____

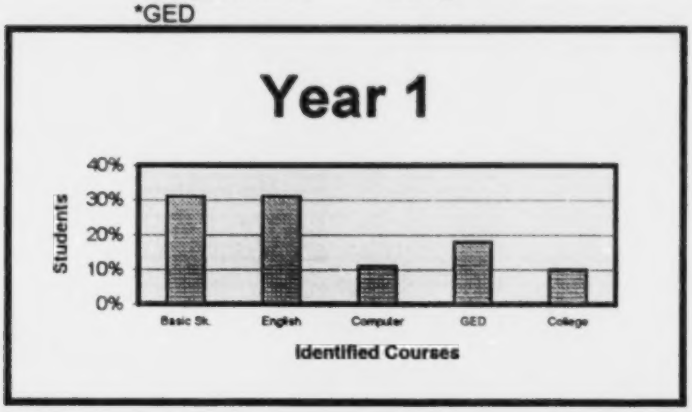
_____

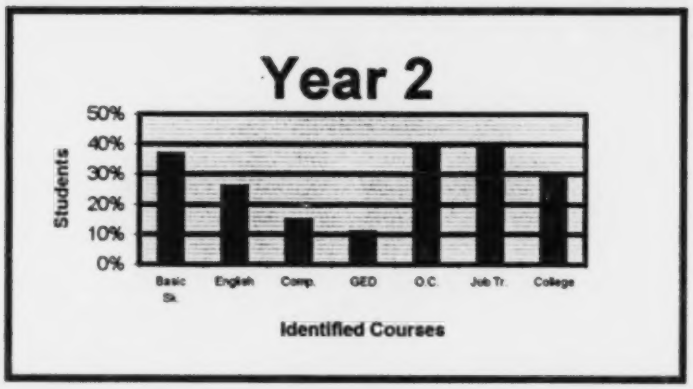
INDIVIDUALIZED EDUCATIONAL PLAN

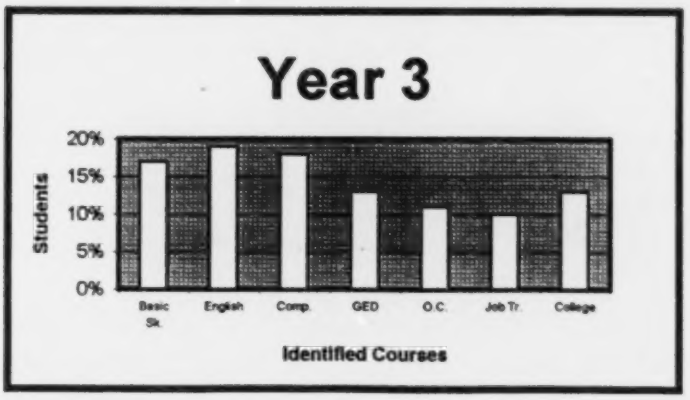
Future Courses as Identified by Learners

The following educational interests and goals are represented in the graphs below:

- *Basic Skills
- *English
- *Computer Skills
- *GED
- *Occupational Certification
- *Job Training
- *College

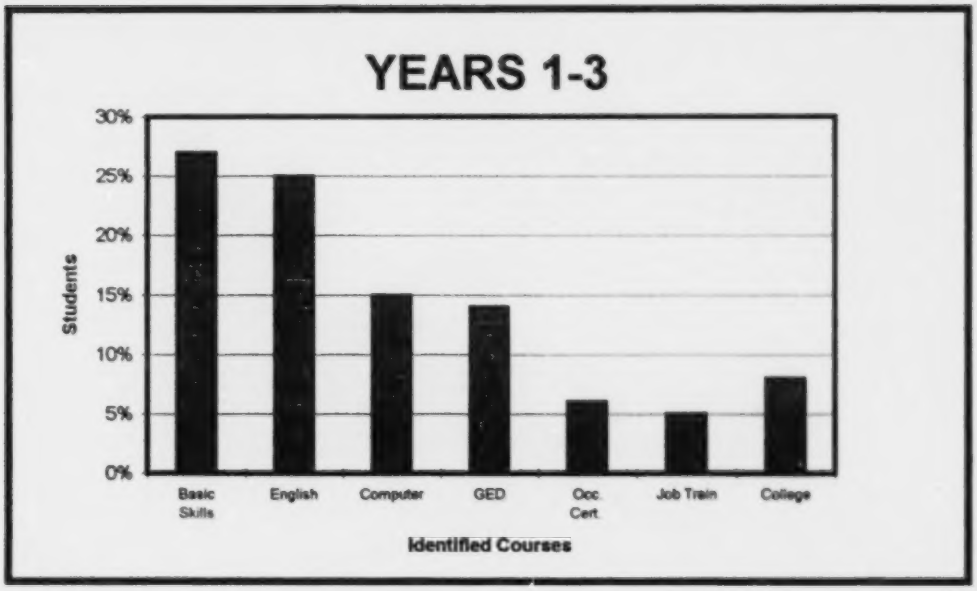






INDIVIDUALIZED EDUCATIONAL PLAN

Future Courses Identified by Learners



OBJECTIVE 7

Insure business involvement in the project

Business involvement was always considered essential and beneficial in all grant operations with all eight companies enthusiastically and faithfully participating over the three year period.

One of the main ways this objective was met was the establishment of the Business Partner Advisory Council, comprised of business partner representatives and grant staff personnel. Meetings were held approximately every six weeks, conducting seven meetings in Year One, five in Year Two, and four in Year Three. This group provided valuable business and educational information and input that directly impacted instruction and allowed program success. The agenda varied according to learner, business, and educational needs and issues. This professional partnership was key to the grant program effectiveness and to the achievement of this objective.

The following contributions, activities, and processes serve to validate the extent of business involvement and fulfillment of this objective:

- The establishment of a Business Partner Advisory Council
- The conducting of all council partnership meetings at company sites to allow discussion and viewing of company environment, operations, and products
- The creation of an internal educational advisory committee at each company that included supervisors, plant managers, union representative, exemplary workers, human resources representative, and training coordinator
- The sharing by the businesses of company trends , concerns, and issues for grant and instructional staff
- The creation and monitoring of an educational bulletin board displaying educational information, class photos, newsletters, and schedules

Continued →

- The meetings with the grant external evaluator to discuss and review grant operations
- The release of supervisors to attend the Partnering in Workplace Education: Supervisor Meetings presented by grant staff
- The input and feedback in the development and adaptation of the model workplace curriculum and other workplace grant manuals and publications
- The collaboration in scheduling assessment and instruction
- The tracking and reporting, on a six month basis, of items for organizational impact
- The organization and hosting of end-of class ceremonies to recognize learner and company achievements
- The attendance at and active participation in start-up, mid-point, and close-out national grant conferences
- The dissemination of workplace education from a business perspective at local, regional, state, and national conferences

The cooperation and collaboration between the business partners and the National Workplace Literacy Grant has steadily grown and flourished over the three year period which has fostered a strong business and educational link.

OBJECTIVE 8

To carry out an ongoing, comprehensive evaluation of the grant project

In order to have an on-going comprehensive evaluation we chose to follow Kirkpatrick's * 4-level model, customizing it to appropriately measure instruction, curriculum, and the effectiveness of the program. A variety of methods were used. (See the attached table, **Evaluation** for the grant's customized model).

Level One included measurement of customer satisfaction through surveys, college evaluation forms, and federal NWLIS reporting. (See the following charts, **New Skills: 1995, 1996, and 1997**). These charts reflect the learners' self-assessment and evaluation of targeted skills pertaining to basic skills. Overall, the learners indicated improvement of skills, which reflects learning did occur. This evaluation technique also shows learning by the increased ability for the ESL population to read and understand the registration and evaluation forms. This evaluation approach was beneficial as it served to give the learner the opportunity and responsibility for his/her own evaluation.

Level Two, general and workplace knowledge, was measured through standardized and customized assessments as well as mastery of learning objectives. See Objective 1 for a description and visual representation of standardized and customized assessment evaluation. Mastery of Learning Objectives was another approach for ongoing evaluation of the workplace knowledge and was an extremely effective and successful method. It evaluated *learning*, not standardized test score gains. The measurement gives each company a true picture of what the learner has learned, can transfer to, and retain on the job. A benchmark of 80% was chosen to determine mastery of learning objectives as it took into consideration the learners experiential knowledge and successful employment as well as the minimum achievement needed for gain of new workplace skills. (See attached sheet , **Learning Objectives Years 1-3**).

Level Three, transfer of learning, was measured through student transfer cards, supervisor interviews, collection of anecdotal information, and conducting of focus groups. This approach proved to be very insightful, effective, and did show significant impact. A plethora of information was gained over the course of the three years that allowed for adjustments, changes, and planning for instruction, curriculum, and staff development. Based on the information collected, it can be stated that the classes very positively changed the learners' behavior in and out of the workplace. (See attached sheets **Transfer of Learning, Antecdotal and Transfer Information, Business Partners' and Supervisors' Focus Groups,** and **Learners' Focus Groups**)

Level Four, organizational impact, was measured by each company tracking 3 - 4 items of their choice over the course of the three-year grant. Overall, the items chosen by the companies to track did not reflect any significant impact from the classes in large part due to the different intervening variables affecting the viability of the items chosen to track. For example, one company chose to track *suggestions*. Between the benchmarked year and year one a significant increase in the suggestions offered by the employees occurred. Between years one and two and two and three, the amount of suggestions offered decreased dramatically. Upon closer inspection it was determined that the company quit offering a monetary award for any employee suggestion that was offered and subsequently acted upon. Therefore, it could be determined that the NWLP would probably have had little impact on the number of employee suggestions offered once the monetary award was taken away. (See the attached sheets provided by each company explaining its **Organizational Impact**)

The grant external evaluator, Dr. Eunice Askov, conducted formative and summative evaluation visits. Dr. Askov visited the eight companies twice a year, observed classes, reviewed grant activities and products. She also discussed activities with grant staff and college personnel, and conducted focus groups with learners, supervisors, and business partners to collect data regarding the effectiveness of the grant classes. This data was subsequently entered into a data base and the results and conclusions are included with Dr. Askov's report.

*Kirkpatrick, D., 1994. *Evaluating Training Programs*. San Francisco, Ca.: Barrett-Kochler

Evaluation of National Workplace Literacy Program
College of Lake County

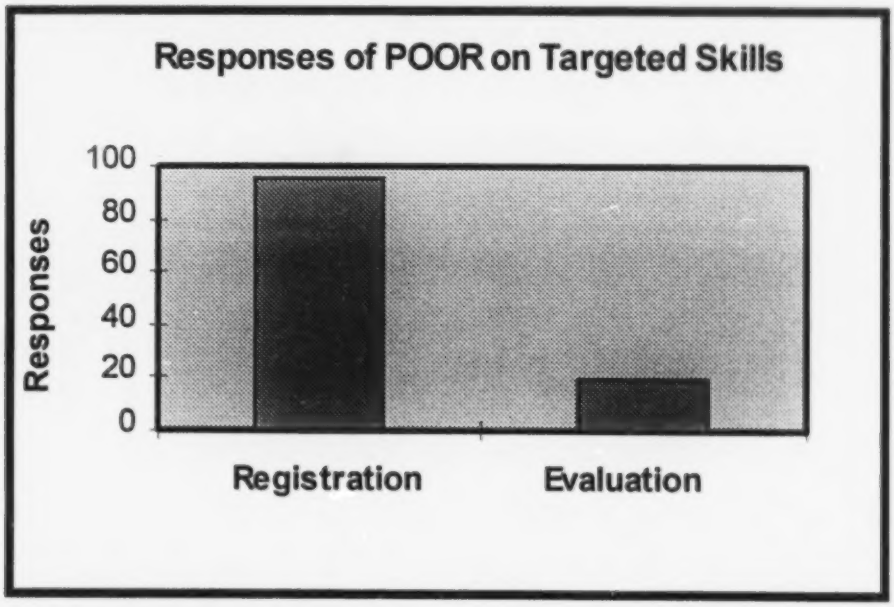
LEVELS	LEVEL ONE	LEVEL TWO	LEVEL THREE	LEVEL FOUR
WHAT IS MEASURED	Reactions and Satisfaction	General and Workplace Knowledge	Transfer of Learning Class to Work to Home	Organizational Impact
HOW IT IS MEASURED	+Surveys +Questionnaires +NWLIS	+standardized assessment +mastery of learning objectives +customized assessment	+student transfer cards +supervisor interviews +anecdotes	+promotion +safety +error/scrap

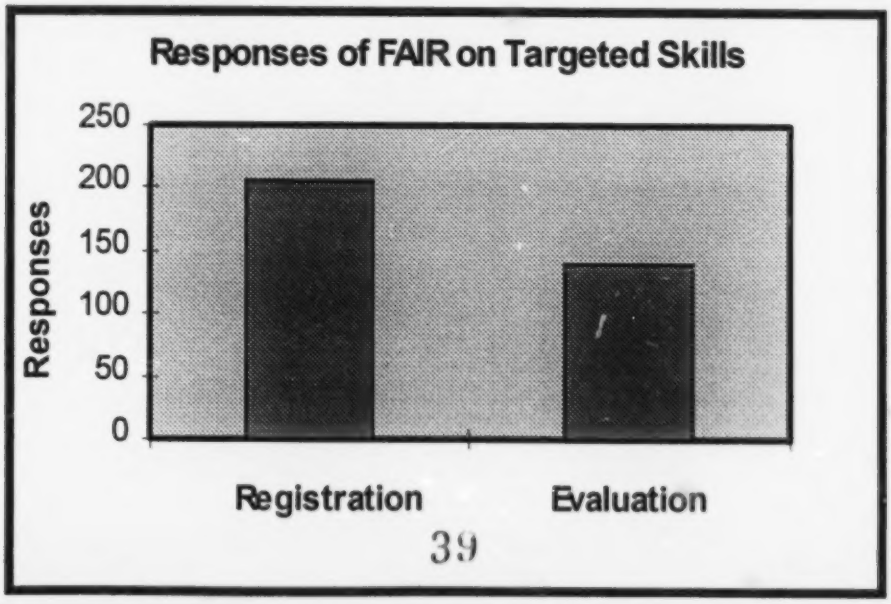
NEW SKILLS: 1995 and 1996

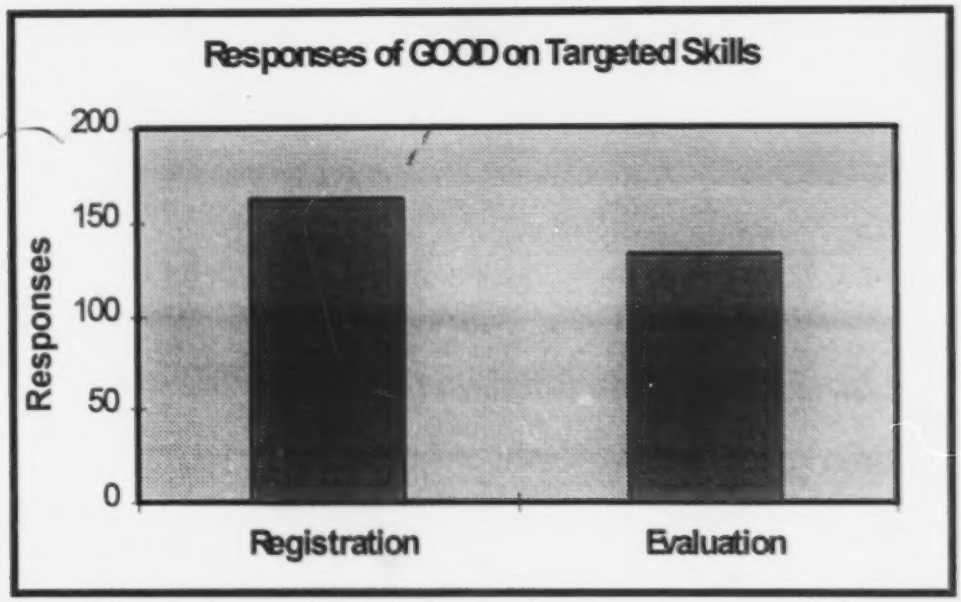
For Year One and Year Two the grant was required ,with NWLIS, to have learners complete ***Learner /Enrollment Registration*** forms at the beginning of instruction and to complete ***Learner Assessment /Evaluation*** forms after instruction. The same targeted skills were listed on both forms and the learners had the opportunity to mark *poor*, *fair*, *good*, or *excellent*. Two companies were randomly selected for final reporting.

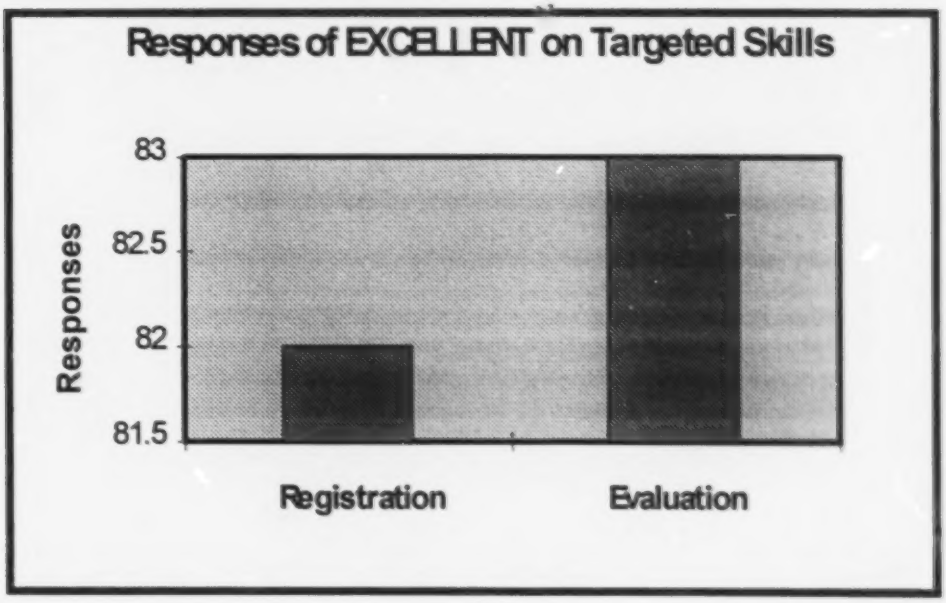
The targeted skills include:

Read English	**Understand English**
Speak English	**Write English**
Work as a Team	**Use Math**
Solve Problems	**Use Reasoning**



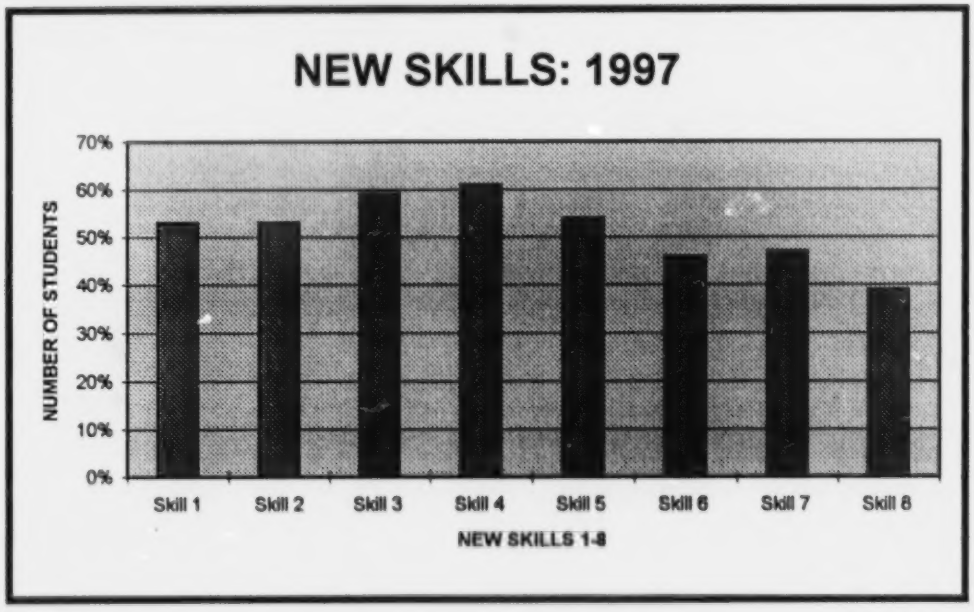



Responses of GOOD on Targeted Skills
200
150
100
50
0
Responses
Registration
Evaluation


Responses of EXCELLENT on Targeted Skills
83
82.5
82
81.5
Responses
Registration
Evaluation

NATIONAL WORKPLACE LITERACY

SESSIONS 1 & 2



This graph reflects skills gained by students while studying in the National Workplace Literacy Program.

Skill 1 represents increased ability to read the newspaper
Skill 2 represents increased ability to help children with homework
Skill 3 represents increased ability to speak with supervisor
Skill 4 represents increased ability to fill out forms
Skill 5 represents increased ability to write a note in English
Skill 6 represents increased ability to use a calculator
Skill 7 represents increased ability to apply problem solving skills
Skill 8 represents increased ability to use math at work or home

LEARNING OBJECTIVES Years 1, 2, and 3

This list represents the most frequently presented and mastered learning objectives. Below each list is the average of the mastery percentages for each subject area.

ESL

Ask and respond to basic open-ended questions used in the workplace.
Demonstrate understanding of the common parts of a workplace form.
Skim a workplace form and list its main headings or parts.
Create a sequenced narrative in past tense.
Identify the main idea of a chart.
Rewrite a statement about job and change to question, commend, and exclamation.
Make and respond to requests to borrow tools or supplies, and for a sick day.
Name areas of the workplace and describe physical location.
Give and respond to a variety of safety warnings in the workplace.
Create a checklist of specific information to look for in a chart.
Create a checklist of specific information to look for in a graph.
Ask and respond to "wh" questions used in the workplace.
Paraphrase written material from the workplace.
Identify key words on standard workplace forms and schedules.
Write a note using basic sentence structures giving work instructions to workers on the next shift.
Outline the steps in problem solving.
Write a workplace narrative using phrasing.

*The average mastery for the above ESL objectives is **91%***

Blueprint Reading

Measure the height, width, depth of a simple object.
Name the three principle views necessary to describe the shape of an object.

*The average mastery for the above Blueprint Reading objectives is **100%***

Communication Skills

Identify information across rows and down columns in a variety of graphic formats.
Read and state company policy regarding absences/sick leave.
Summarize information in a company schedule, chart, or graph.
List steps to complete a task.
Skim and scan information regarding health care coverage
Ask questions to check for understanding.
Review and clarify steps to a task.
Write a message in clear and concise sentences.
Identify the three parts of a paragraph.
Write a clear, concise, grammatical paragraph using the paragraph-writing process that focuses on a simple main idea.

*The average mastery for the above Communication Skills objectives is **88%***

Math

Convert a fraction form to a decimal form by dividing the top of the fraction by the bottom.
Add, subtract, multiply, and divide measurement numbers using fractions and/or decimals.
Round measurement numbers to a designated significant digit commonly used in the production process.
Calculate the percent of change - decrease or increase in a machine output of product per day.
Determine place value of decimals.
Convert a given measurement from one unit to another.
Convert percent to decimals.

*The average mastery for the above Math objectives is **85%***

Problem Solving

Define the Process.
Outline the steps in a problem solving process.
State the difference between a symptom and a cause.
Brainstorm a list of options to a problem statement

*The average mastery for the above Problem Solving objectives is **83%***

TRANSFER OF LEARNING
SUPERVISOR AND BUSINESS PARTNER RESPONSES TO THE FOLLOWING QUESTION

What kind of transfer of learning have you seen?

- supervisor can speak more English directly to learners
- more aggressive in completing job tasks
- try harder in communication in English and Spanish
- confidence level higher
- can read and understand bill of materials better/read numbers for daily production
- now take charge of daily tasks more with less supervisor direction
- more self-reliant
- job now easier for supervisors
- more able to do company training
- company now doing team cells and are more adept to do this
- ask questions previously afraid to ask
- more interested in company operations; ask questions and want information
- not as timid
- now signing up for job listings--bid sheets
- can now fill out own forms for vacation and operations
- communication much better--ask more,
- questions more detailed
- able to interpret safety signs
- could explain company policies for QS9000; auditing better than employees not in class
- we can give directions knowing that they will understand
- speaking with confidence
- more interactive with peers, co-workers
- less use of translators
- pursue tasks more aggressively
- willing to share with supervisors
- able to understand instructions in English better
- willing to try more things
- more confidence in communication in English and Spanish
- can understand work documents better
- not so dependent on supervisors
- can absorb more details
- appreciate safety issues and are aware of procedures
- can give directions with confidence
- more interactive
- can fill out their own forms
- more confidence to apply for new jobs
- ask detailed questions
- writing improved
- ask for proper spellings of words

ANECDOTAL AND TRANSFER INFORMATION
SUMMARY OF YEARS 1, 2, AND 3

The grant project was evaluated on a continuing basis by anecdotal reporting with learners. This information was reported to the instructors and grant staff on written evaluations, conversations, and the collection of transfer cards as outlined in the NWLP curriculum. The results are as follows:

- To converse with more confidence with co-workers, supervisors, education professionals and other personnel
- To hear English language points that had previously escaped them
- To write clearer letters and messages
- To use more exact language and longer constructions
- To now help their children with homework
- To more clearly understand production processes and company terminology
- To more effectively work as team members and problem solve
- To use blueprints, plan and edit writing, and find needed work information
- To now make effective presentations
- To have overcome fear of math and mathematical processes
- To feel improvement in reading and writing which in turn helped their confidence to become better workers as a result of having participated in the program and for that reason more valuable employees
- To identify new goals, which included further education and promotion

Business Partners' and Supervisors' Focus Groups

The following questions were asked of supervisors and business partners in focus group sessions at the end of the program.

What kind of transfer of learning have you seen?

Supervisors and business partners report, in summary, that learners are now more self-reliant, assertive and independent. Increased confidence enables them to ask questions and try new tasks, which they pursue more aggressively. They are more able to comprehend work documents, operations and company policies, fill out forms, and read numbers for daily production. They have better understanding of safety issues and procedures. They are more confident with both English and Spanish. Supervision is easier now because learners can fill out their own forms for vacation and operations, can absorb more details and ask more detailed questions. There is no longer such need for interpreters. Finally, learners are signing up for job listings.

How have your ideas about education changed since the beginning of the grant?

- I have always highly regarded education.
- Employers are more open now to providing basic education and training.
- My ideas of what a community college can offer have expanded.
- Initially we felt that learners wanted to attend classes just to get out of work, but once we saw improvements on the job and noticed increased confidence, we were more supportive.
- I have seen that education can develop leadership qualities.
- I didn't realize that business needs could be met by this curriculum.
- I didn't appreciate the significance of my role--deciding what kind of classes were needed and who should attend.
- I didn't know what a difference learning could make to learners in terms of attitude and progress up the company ladder.

Do you see any distinction between education and training?

- Education leads to training, provides foundation for training.
- Training is for a particular task.
- Education takes longer; training is a one-time shot (absorb all in one class).
- Someone who can not read and write can be trained to do a job.
- Training is secondary to education.
- No, it is hard to train uneducated employees; have to do lots of re-training.
- Education is broader than training.
- You train a dog but you educate a human.
- Education and training have to be balanced, need both.
- Training should come before education.
- Education leads to training being received more easily.

Do the NWLP Classes make it any easier for the employees to participate in company sponsored training programs?

- Yes because of the ability to generate questions and bring ideas forward.
- Yes training is more effective.
- Training can be done less in Spanish.
- Yes, QS9000 - the customer service from NWLP has helped further this company training
- Yes, there is more confidence to pursue Baxter training.
- Yes, workers are able to ask questions.
- Yes, class enabled participants to practice with company materials.

Has the potential for promotion improved?

- Yes, more reading of materials and deeper product understanding allow for promotion.
- Problem-solving and math class helped two learners gain promotion.
- Classes provide the confidence necessary to apply.
- Understanding of the job listings makes a big difference.
- Increased confidence leads to asking supervisors if they would be a good candidate.
- Yes, learning is the first step to promotion.
- English skills and production knowledge have facilitated promotion.
- Several learners have been promoted (names given):

Overall, have the classes been valuable to you in relationship to the sacrifices of scheduling, extra pay, decreased production, space allocation, extra time for program support? In what ways?

- As long as you know ahead of time, re-scheduling is easy. Co-workers are receptive to helping other workers attend class.
- Learners are dispersed amongst departments. Others pick up slack. Substitutes like to learn new jobs.
- Yes, the change in attitude makes it all worthwhile.
- We no longer view this as an interruption.
- Education is part of a good company operating system.
- Well worth it! Pulling people from one job to do another had the benefit of cross-training.

How will you promote education for your employees?

- We will encourage learners to pursue education even outside the company.
- It is hard to convince upper management of long term educational needs. They have a narrower focus. Production and financial support of other company divisions is more important.
- Learners were hesitant the first year. Then the domino effect took over. Now they recruit each other.
- We will send memos and surveys to supervisors, asking what kind of skills they need in their departments, and we will design classes.
- A corporation-wide training support will determine job training and educational goals for our future.
- We report educational hours per employee on their paychecks.
- A community college will help Baxter promote Baxter certification.
- We encourage employees to take classes outside of work.

BUSINESS PARTNERS' AND SUPERVISORS' FOCUS GROUP

1. What are your company's educational *goals* for the future?

2. What kind of transfer of learning have you seen?

3. What are your company's present educational *needs*? Future *needs*?

4. How have your ideas about education changed since the beginning of the grant?

5. Do you see any distinction between education and training?

6. Do the NWLP classes make it any easier for the employees to participate in company sponsored training programs?

7. Have you seen evidence of improved communication? How?

8. Are the students better able to understand and follow company procedures?

9. Has the potential for promotion improved?

10. Are the employees who participated in the program more valuable to you and the company that those who did not? In what ways?

11. Overall, have the classes been valuable to you in relationship to the sacrifices of scheduling, extra pay, decreased production, space allocations, extra time for program support? In what ways?

12. Would you be willing to continue to invest in the employees' education?

13. How will you promote education for your employees?

LEARNERS' FOCUS GROUPS

The grant project was evaluated on a continuing basis by anecdotal reporting and at regular intervals by in-focus meetings of grant staff and clientele. The following questions were asked of learners.

What do you like about learning?

- The teacher listens to all of us, she is patient.
- I realized how smart I was from these classes.
- It helps me get along with people better.
- It was practical to learn about work problems.
- The teachers helped me refresh my memory.
- I like it that I can help my children from what I have learned.
- Now I can watch movies in English and TV is a little easier to understand.

Are you able to communicate better at work? Do you speak up at meetings? Do you ask more questions? Do you talk more to your co-workers, supervisors and other employees?

- Yes, I like group discussions now.
- I can talk to anyone now.
- Now I know what people to talk to and how to talk to them.
- Now I can introduce myself.
- I know what the words mean that are used in the company.
- I can talk better to higher level people, feel comfortable.
- I can communicate with my co-worker and answer his questions.
- If there is a problem I can deal with co-workers.
- I can translate for fellow workers.
- I try to get people to speak more English now.
- My supervisor and I can talk together.

What skills are still difficult for you?

- Math is still hard.
- Pronunciation, present and future tense.
- Writing
- Reading
- I need to know more words. Sometimes I still can't understand.

Did the classes meet your personal needs and goals?

- Yes and more. First class seemed silly, then I learned to like it.
- Yes, a stepping stone to other classes, harder classes.
- Some. If I learned more tenses it would help me on the job.
- Yes, now I can take the computer class.

Do you think the workplace classes have improved the quality of your work? In what ways?

- I can use numbers better and quicker. I can count product faster.
- Completing class made me feel good, so I am more confident and my work is better.
- Yes, I use writing on my job, write tickets.

LEARNERS' FOCUS GROUP QUESTIONS

1. Do you think education is important in getting and keeping a job?

2. What do you like about learning?

3. Do you learn better if the instruction is presented using workplace examples?

4. Outside of your job, what can you do now that you couldn't do before you took classes?

5. Are you able to communicate better at work? Do you speak up at meetings? Do you ask more questions? Do you talk more to your co-workers, supervisors, and other employees?

6. Why did you attend these classes?

7. What skills are still difficult for you?

8. Did the classes meet your personal needs and goals?

9. Do you think the workplace classes have improved the quality of your work? In what ways?

ORGANIZATIONAL IMPACT
GENERAL METAL PRODUCTS

Sales Gain vs. Training Investment

December 1993-November 1994	December 1994-November 1995	December 1995-November 1996	December 1996-June 1997
Not available	9% Sales Gain vs. 2% Training	29% Sales Gain vs. 1% Training	9% Sales Loss vs. .9% Training

The percentages above show the ratio of increases of production in terms of sales vs. training investment.

The following shows the outcomes of ESL training vs. training for native speakers of English.

English-speaking students	**24**	**24**	**24**
Total promoted	6	8	8
Total terminated	10	11	12
ESL students	**25**	**25**	**25**
Total Promoted	11	18	24
Total terminated	11	14	17

ORGANIZATIONAL IMPACT
KENALL

December 1993 - November 1994	December 1994- November 1995	December 1995- November 1996	December 1996- June 30, 1997
Absences	**Absences**	**Absences**	**Absences**
15/13 learners	17/14 learners	11 days/10 learners	15/16 learners
.86/learner	.82/learner	.90/learner	1.5/learner
Tardy	**Tardy**	**Tardy**	**Tardy**
52/13 learners	50/14 learners	36 days/10 learners	2/10 learners
.25/learner	.28/learner	.27/learner	.2/learner
Promotions	**Promotions**	**Promotions**	**Promotions**
3/13 learner	2/14 learners	2/10 learners *	1/10 learners
.23/learner	.14/learner	.20/learner	.10/learner
Applications/ for Promotion	**Applications/ for Promotion**	**Applications/ for Promotion**	**Applications/ for Promotion**
3/13 learners	5/14 learners	1/10 learners	2/10 learners
.23/learner	.35/learner	.10/learner	.20/learner

Absence: Any day or period of consecutive work days that an employee does not report to work. Vacation days and personal or sick days used from earned paid time off will be excused.

Tardy: Employees not being engaged in their work during the beginning or resumption of their scheduled work time are tardy.

Application for Promotion: The employee verbally expresses an interest to his/her immediate supervisor. If the employee has the required skills for the available position, then that employee would be interviewed by the supervisor who has the opening in his/her department.

Note: not all promotions are the result of a job posting.

* One of the employees who was promoted, was later demoted back to the original job held. The reason for the demotion was not attributed to English skills.

ORGANIZATIONAL IMPACT
BAXTER

	December 1993 November 1994	December 1994 November 1995	December 1995 November 1996	December 1999 July 1997
Safety	16	5	21	13
Suggestions Submitted	73	148	79	57
Absenteeism	2.3 days plant average	2.3 days plant average 2.12 days/26 students	3.4 days plant average 2.04 days/18 students	2.3 days plant average

Safety is reflected in the number of OSHA recordable incidents.

Suggestions Submitted through our involvement system (PRIDE). The numbers clearly show that our hourly population is involved and notice things that need improving. Skills enhancement programs have developed these employees and given them the encouragement to actively participate in our business needs. These numbers do not reflect only the employees that have recently participated but an overall of all hourly employees.

Absenteeism for year three is not going to be directed just toward participants. There was only a small number of participants and unusual circumstances. Several of the participants have been off on disability during this period of time. These circumstances do not show a true picture of the effect of the program on how the participants relate it to their work attendance ethics.

ORGANIZATIONAL IMPACT
MACLEAN FOGG

January 1994 December 1994	January 1995 December 1995	January 1996 November 1996	December 1996 June 1997
	Accidents	**Accidents**	**Accidents**
Not available	2/10 learners	1/10 learners	0/9 learners
	Absences	**Absences**	**Absences**
Not available	23/10 learners	16/10 learners	10/9 learners
	Tardy	**Tardy**	**Tardy**
Not available	31/10 learners	22/10 learners	14/9 learners
	Promotions	**Promotions**	**Promotions**
Not available	0/10 learners	3/10 learners	0/9 learners

Accidents: OSHA recordable incidents.

Absences: Any time an employee is not present at work, except for a scheduled vacation or holiday. Vacation time must be scheduled at least two days in advance

Tardy: Any time an employee punches in on the timeclock later than the start of the shift or after the end of the scheduled lunch break.

Promotion: To move from one job grade to the next.

ORGANIZATIONAL IMPACT
MACLEAN POWER SYSTEMS
(formerly Reliable Power)

December 1993 November 1994	December 1994 November 1995	December 1995 November 1996	December 1996 June 1997
Accidents 0/24 learners	**Accidents** 0/24 learners	**Accidents** 0/24 learners	**Accidents** 1/28 learners
Absences 79/24 learners	**Absences** 45/24 learners	**Absences** 71/24 learners	**Absences** 62/28 learners
Tardy 24/24 learners	**Tardy** 29/24 learners	**Tardy** 47/24 learners	**Tardy** 38/28 learners

Accidents: OSHA recordable incidents.

Absences: Any time an employee is not present at work, except for a scheduled vacation or holiday. Vacation time must be scheduled at least two days in advance. Absences have become part of each worker's performance evaluation for pay increases. This may have led to more conscientious bookkeeping by the supervisors, leading to an increase in the number reported.

Tardy: Any time an employee punches in on the timeclock later than the start of the shift or after the er of the scheduled lunch break. As with absences, tardies have also become part of each worker'. performance evaluation for pay increases. This may have led to more conscientious bookkeepii by the supervisors, leading to an increase in the number of tardies reported.

ORGANIZATIONAL IMPACT
NICHOLS ALUMINUM

	FY94	FY95	FY96	FY97*
Safety	18.2	16.4	13.9	9.9
Quality	1.37%	1.91%**	2.44%	.07%
Quality	18.4%	11.7%	10.59%	10.4%***
Volume	64,000,000	139,671,000	159,029,806	107,072,987

* Data represents first 6 months of Nichols Aluminum's fiscal year.

** Increase caused primarily by an increase in new customers and therefore new requirements. The 100% increase in Volume required entry into new markets; with new needs, demands and expectations.

*** Number is higher than normal because of supplier material problems.

1. **Safety** - Measure represents all OSHA recordable accidents.

Our ability to provide and assure a safe work environment is dependent on the abilities of our workforce to be trained, to communicate effectively with each other, and to read warning signs and other documentation. Although we have translated some of our safety materials and tests into Spanish in the past, it is no loner being done. Our signs, documents, videos, and meetings are now all in English with the help of ESL classes.

2./3. **Quality** - Measure represents quality defects found both internally (by our employees) and externally (by our customers).

Because our equipment is so new, our ability to produce defect-free product is dependent on our ability to establish standard practices, to implement these practices across the different work teams, and to recycle (improve) these practices as our experience grows.

We involve the workforce in writing, implementing, editing, and enhancing our practices and procedures. They are also required to participate in the training of new employees, to participate in team problem solving and process improvement activities, and to attend weekly training sessions (dealing with issues of safety, process, and quality).

4. **Plant Volume** - Total amount of product produced by the organization - without consideration for losses due to quality.

As with Quality, Volume is dependent on our workforces ability to work as a team, to find better ways to operate the equipment, and to solve problems that lead to equipment downtime. Our work teams, problem solving teams and supervisor-operator partnerships must be able to communicate and problem solve as an integral part of the everyday work environment and during meeting/training sessions.

Explanation of Measures Chosen to Evaluate the Impact of the NWLP.

Between the spring of 1994 and the fall of 1995, Nichols Aluminum rebuilt their Lincolnshire plant literally from the ground up. This included replacement or refurbishment of every major production line in the plant and a doubling of our production workforce. Also during this time, Nichols Aluminum found that in order for shop floor workers to do their job correctly, a basic knowledge of math and English skills were needed. For new hires a basic Verbal and Quantitative skills test is given. For existing employees ESL classes were offered through NWLP to help improve necessary skills.

Performance measures evaluated for the organizational impact the NWLP were chosen because they represented opportunities for improvement which were highly dependent on the communication capabilities of the workforce. Improvements in reading, writing, communication, math, and problem solving skills will impact the measures listed above.

The bottom line: Nichols Aluminum has a diverse workforce with limited experience, and we are targeting new markets to take advantage of additional capacity - it is essential that we have a workforce that can communicate, problem solve, and operate as a team. The skills addressed by the NWLP grant was a part of Nichols Aluminum, the number of accidents has gone down, percent of customer returns is less, the number of pounds produced has increased, and the percent of in-house on-hold has gone down each year since 1994 with the exception of 1997 which could possibly be high due to supplier material problems.

Overall result is all target areas have improved since the NWLP grant began. During the past six months we set production records in a number of departments.

The **Cold Rolling Mill** reached a record high for total pass pounds produced in one month, the average roll change time has dropped, the between coil time has lowered, and have achieved the highest level of standard hours earned.

The **Strand Line** has set records for daily finished pounds, monthly finished pounds and a record low between coil time.

The **Tension Line** set a record for monthly pass pounds and a record low between coil time.

STONE CONTAINER
ORGANIZATIONAL IMPACT

January 1993 November 1994	December 1994 November 1995	December 1995 November 1996	December 1996 June 1997
Absenteeism 517 days/170 empl.	**Absenteeism** 50 days/29 learners	**Absenteeism** 32 days/17 learners	**Absenteeism** 12 days/8 learners
OSHA Accidents 20/170 employees	**OSHA Accidents** 3/29 learners	**OSHA Accidents** 1/17 learners	**OSHA Accidents** 0/8 learners
Promotions 28/170 employees	**Promotions** 4/29 learners	**Promotions** 3/17 learners	**Promotions** 4/8 learners
Appl. for Job Bids 216/170 employees	**Appl. for Job Bids** 15/29 learners	**Appl. for Job Bids** 9/17 learners	**Appl. for Job Bids** 5/8 learners
Prod. Records - 4 39/170 employees	**Prod. Records - 4** 10/29 learners	**Prod. Records - 3** 4/17 learners	**No Records Set**

Absenteeism is defined as an unexcused day from work. Jury duty, funeral leave, holidays, non-scheduled days, vacations, work-related injury, lay off, suspension, lack of work, or leave of absence - - are acceptable reasons for not being at work and an employee is not considered to be absent from work. Being sick, taking the day off, not waking up for work, etc. are all considered to be absenteeism.

OSHA Recordable Accidents are defined as accidents that happen at work which cause the employee injury. Medical attention requiring prescription medication, stitches, work restrictions, lost time from work, treatment of infection, 2nd or 3rd degree burns, removal of foreign bodies from the eye or any wound, positive x-rays, admission to a hospital, or any combination of this list is an OSHA recordable accident. All injury or illness that results in death, or loss of consciousness, restriction of work or motion, or transfer to another job also make the incident OSHA Recordable.

Promotions are defined as an hourly employee moving from a lower pay grade to a higher pay grade. There are 10 pay grades for hourly employees covered by a Union Labor agreement. If an employee is in pay grade 4 and bids for a job in pay grade 6 and gets it, it is a Promotion. If an employee is in pay grade 6 and bids for a job in pay grade 4 and gets it, it is not considered a demotion, only a job change - - since all jobs are bid on in the plant and awarded on the basis of seniority. There are several jobs which are considered Progressive and are considered Promotions. A Helper of a machine can progress to become the Operator of the machine by knowledge and experience, and if no senior employee is qualified. Also, any hourly employee promoted to a Supervisor is a promotion from an hourly to a Salaried position.

Production Records are kept by the Accounting department for various reasons. In this facility, Production Records can be broken by two standards: Number of pieces converted through a machine OR total lineal or square footage produced. Simply put, each machine has a record of the number of pieces that pass through it in an eight hour period. If a crew exceeds that number in an eight hour period, the record is broken. Records are also maintained for the lineal or square footage run through a machine. If a crew in an eight hour period surpasses that number, the record is also broken. All records are posted and recognition is given for those employees responsible for the new production records.

OBJECTIVE 9

Disseminate promising strategies and other project outcomes

The dissemination process was carried out by all grant staff, business partners, supervisors, and learners, both formally and informally. Business partners enthusiastically participated in presentations and they discussed the grant and shared materials at business roundtable meetings. Conference presentations promoted strategies, offered successes and suggestions, and created a high-level profile for the grant in its support of workplace basic skills education. Two series of learning seminars provided repercussive impact for supervisors and instructors. Also, seven manuals were created for a variety of educational purposes, employed in a wide range of ways, distributed on request, nationally and internationally, and published in ERIC Digest. See Objective 3 for Publication List.

Presentations fostered educational involvement at all levels within companies, heightened awareness of educators and business personnel about workplace learning, and promoted valuable techniques and ideas for workplace instructors and programs.

They included the following:

- *From ESL to Workplace ESL*; International TESOL Convention, Long Beach, California, March, 1995
- *Professional Development for Workplace Education Made Easy* (American Association for Adult and Continuing Education, Oct. 1995)
- *Computer Generated Authentic Curriculum: A Learner's Eye View* and *Customizing Commercial Software* (Adult Learning Technology Conference, August 1995)
- *Collaborative Program Development: an Ongoing Conversation between Human Resource Representatives and Educators* and *Creating an Environment for Workplace Education on the Factory Floor:*
- *Workplace Educators Meet with Supervisors* (Illinois Partnerships for Workplace Education Conference, Chicago, Jan. 1996)
- *Teacher/Ethnographer in the Workplace: Approaches to Staff Development* and *Making Mentoring Meaningful to Part-time Instructors* (International TESOL Convention, Chicago, March 1996)

Continued →

- *Solving Workplace Problems through Problem-based Learning, Promising Practices in Staff Development*, and *Learning Transfer from the Classroom to the Workplace and Beyond* (Workplace Learning Conference, Milwaukee, April 1996)
- *Partnering in Workplace Education: Supervisors and Educational Providers* and *The What, Why, and How of ABE in the Lake County Skills Development Program* (Illinois Partnerships for Workforce Education, Chicago, Jan. 1997)
- *Knowledge in the Workplace and Beyond: A Model Curriculum, Methods of Measurement: Linking Assessment to Instruction, and Teacher/Ethnographer in the Workplace* (Workplace Learning Conference, Milwaukee, April 1997).

The learning seminars were targeted for two specific groups: supervisors and instructor. The *Partnering in Workplace Education:Supervisor Meetings* were presented for over 18 supervisors of 8 business partners (April and May, 1996, Jan., 1997). This allowed for the grant staff to educate the supervisors on course content and to disseminate the effective program strategies and materials. This dissemination proved most successful as the supervisors became one of our best educational advocates in the company and in presentations at business and education conferences. See attached sheet (***Introduction and* Agendas**) Problem-based *Learning* was presented both to CLC associate deans and vocational technology administration (August 1996) and to a wide spectrum of instructors (Jan. to April 1997). See attached sheet (***Problem-Based Learning and Workplace Problems***). A display-presentation of our program was made to Illinois Community College presidents and board of trustees in June, 1996.

Dissemination by all involved business and educational individuals proved to be key in the success of our instruction, curriculum development, and the entire program.

PBL WORKPLACE PROBLEM STATEMENTS

The following is a list of problems that have been developed with the assistance of the grant business partners for the learners in our program. These problems are in various stages of development and always need to be adapted to a new group of learners.

Problem	Subject/skills	Problem statement	Product/ Performance
Inventory control	Reading Mathematics Problem solving	The inefficiency, and often, lack of inventory control has caused two major problems for a manufacturer of nuts and bolts for the automotive industry. Materials are received which are not allocated to a job or the materials needed for a job are not in "spec". How does the company strengthen its inventory control system in such a way that no additional human and/or financial resources are necessary?	Written recommendation
Following procedures	Reading Following instructions	The company procedures require that each sequence of an operation must be submitted to inspection for approval. The employees are not adequately following this process. How can we effectively enforce the process in such a way that the needs of the company and of the employees are met?	Bulletin board - display of process
Communication	Oral and written communication	Shift to shift communication is weak. This weakness causes problems to be carried from one shift to the next. How can we create an effective communication process in such a way that it does not require extra time/hardship on the employee?	Written description of new process
Turnover	Reading Oral communication Safety	High turnover rates have caused instability in a company that mainly works in teams. How can we train, in the shortest possible time, considering that we need to develop effective team members as well as addressing the safety issues?	Panel presentation
Internal Company Waste	Writing Problem solving	This pharmaceutical company is using too many disposable gloves in its finish operation. How can we reduce glove usage considering we have to maintain sterile conditions, meet budget requirements, and have a self-monitoring process?	Memo to department managers

Problem	Subject/Skills	Problem statement	Product/ Performance
Interpersonal skills with co-worker	Oral communi-tion	This light fixture company finds that when its employees discover an error they respond by gossiping and blaming a person, not addressing the problem. How can we encourage employees to treat problems from a perspective in such a way that company problems, not personal issues are addressed??	Oral presentation (Role-play)
Cost reduction	Mathematics Reading	A mid-size business builds sheet metal cabinetry for cellular communication electronic units for a large corporation. The client wants a 10% cost reduction of the product supplied to them. How does the company meet this request in such a way that there are profits, no employee loss, and the quality of the product is maintained?	Oral presentation
Computer skills	Reading Problem solving	This manufacturing company, which collects data on all production areas, is upgrading its current software. ALL employees will soon have to interact with the computer system and have knowledge of the data. How can the company depend on the employees to enter and access this essential company information/data while considering the fact that the employees are computer illiterate, only minimal training time is an option, and the software program is completely new to the entire company?	Article for company newsletter
Benefits	Reading	You are a member of the company's review panel. Your team is asked to investigate the possible introduction of a new coverage to the employee's benefits package: *payment for prescription eye glasses*. How will you create a recommendation considering the fact that the proposal should not have a negative impact to the company's financial stability and should enhance, not detract from the employee's current benefits package?	Oral presentation Written memo
Reporting Problems	Writing Oral communica-tion	When problems arise in the production area of this manufacturing company, the ability to communicate to key people exactly what took place is weak. How can we create a communication system in such a way that we know exactly *who* to report to, *how* to report the information in a sequential manner, and *what* details and order to follow?	Written outline and guidelines of communication system

Partnering in Workplace Education: Supervisor Meetings Introduction and Agendas

Introduction

A manual was developed as a result of the supervisor meetings, conference presentations, and nationwide distribution. The manual is a compilation of activities and ideas for use when working with the supervisors of learners involved in workplace basic skills classes. The manual contains the following six sections: 1) Overview, 2) What You Learn, 3) How You Learn, 4) How and What You Communicate, 5) How and What You Transfer, and 6) How and What You Evaluate.

Supervisors are essential for a successful educational program and their involvement in providing information and learning about the basic skills classes is an effective method for achieving success. The supervisor meetings are also instrumental in bridging the gap from transfer of instruction to the workplace. Our national workplace literacy grant attempts to involve all supervisors directly interacting with the learners in order to provide a holistic and outcome-based approach to effective instruction.

The program is designed for two three-hour meetings. It is advisable to have a one to two week break between the meetings in order to have the supervisors bring materials, ideas, and observations from the workplace. It is also possible to have one three-hour meeting with specific selected topics. The meeting should be held while workplace skill classes are in session. Early morning seems to best fit company needs.

The program is structured to involve all business partners, so we attempt to have at least four companies represented at two meetings with two supervisors from each business attending. This blending of companies and supervisors allows for discovery of commonalities, sharing of concerns and issues, gaining broad perspectives, and networking among supervisors. It is also possible to hold these meetings within one company with 2-3 supervisors, human resource personnel, and plant manager.

The supervisors are provided release time to attend the meeting(s). State or federal funded programs can anticipate and build this essential component into the budget as it directly relates to the effectiveness and success of instruction. Contractual workplace programs can sell and include this as an instructional component with charges based on number of meeting hours.

Agenda

Supervisor Meeting 1

Overview

1. Goals and Objectives
2. Roles of the Five Grant Participants
3. Value of Basic Skills Education

What You Learn

1. Job Icebreaker: *First Paying and Current Job*
2. Terminology: *Educational Lingo*
3. Curriculum: *Building Knowledge in the Workplace and Beyond*

How You Learn

1. Learning Styles: *Learning Styles Inventory*
2. Learning Styles in the Workplace: *Left/Right Brain Dominance*
   Characteristics in the Workplace
3. Adult Learner: *Characteristics of Adult Learners*

Supervisor Meeting 2

How and What You Communicate

1. Topics: Expected Employee Behaviors
2. Effective Listening: Listening Facts
   Reasons for not Listening
3. Asking Questions: Questioning
4. Providing Feedback: Feedback Skills
5. Communication Summary: 8 Suggestions

How and What You Transfer

1. National Grant Evaluation Chart
2. 6-Step Student Transfer Process

How and What You Evaluate

1. Supervisor Questionnaire
2. Supervisor's Assessment Form
3. Workshop Evaluation Sheet

PROBLEM-BASED LEARNING COMPONENTS AND BENEFITS

DEFINITION...

Problem-based Learning is an active, integrative, problem-centered approach to curriculum development and instruction. This approach seeks to engage students in handling ill-structured problems which mirror real-world problems. By engaging students in learning in the context of a specific problem,PBL coaches help students to develop their problem solving strategies, disciplinary knowledge bases, and skills simultaneously.

PROBLEMS...

1. should be representative of the kinds of problems the learner is likely to encounter in his/her role and context.
2. should be high impact and messy, rather than narrow.
3. should have the potential to affect large numbers of people for an extended period.
4. should be suitable for integrating knowledge and basic skills from a variety of disciplines
5. should be constructed so as to require learners to reach group decisions and to confront varying views about what the problem is and how it should be handled.
6. should be presented so that learners have to figure out how they should organize themselves to accomplish their product objective within the time constraints.
7. should expose learners to current and future problems.

ASSESSMENT...

1. Three sources : 1. Self 2. Peer 3. Instuctor
2. Formative and summative evaluation is based on:
   - meetings, facilitation and participation (process)
   - final product or performance (knowledge)
   - mastery of learning objectives (skills)
   - learning how to learn and its application (reflection)
3. It can be oral or written.

PRODUCTS...

1. should be representative of the kinds of products and performances inherent in the learner's role/position in the real world.
2. should require learners to use the knowledge and skills they have learned in the project.
3. should require learners to take action and to struggle with issues of implementation.
4. should promote collaboration among team members.

REFLECTION...

1. What new information did you acquire that changed your knowledge and understanding of this problem?
2. What principles or approaches have you learned in working with this problem that will help as you work on future problems with similar characteristics?
3. What have you learned about project leadership, meeting management, problem-solving that may be of use to you in the future?
4. What did you learn about yourself, your ability as a leader, and your participation in a management team as you worked on this project?
5. What strongly held personal and/or professional views, beliefs, or opinions have been changed during this project?
6. What questions have been raised in working with this problem that suggest the need for further study?

WHY USE IT? THE BENEFITS...

1. PBL allows for elaboration of information: it is better understood, processed, and recalled.
2. PBL allows for the similiarity of contexts in which information is learned and later applied.
3. PBL creates intrinisic motivation by:
    a. engaging students in a wide variety of activities
    b. including higher-level thinking and divergent questions
    c. providing immediate feedback
    d. creating a finished product
    e. allowing for interaction with peers
4. PBL allows the learner to work under time constraints (the real world). Time deadlines force the learner to balance the need to understand (analyze) with the need to act (action).
5. PBL allows the learner to be in a role which consitutes roughly equal time of sending and receiving communication (mostly in oral form).
6. PBL allows the opportunity for learners to experience and assess their competence in interpreting and responding to the feelings and ideas of others.

(adapted from Bridges *Problem-Based Learning for Administrators, 1992* and Bridges and Hallinger *Implementing Problem-Based Learning in Leadership Development, 1995*)

OBJECTIVE 10

Develop with each of the partner industries a plan for continuing their instructional programs beyond the funding cycle.

In order to fulfill this objective, the plan for continuing educational opportunities within each company was initiated in year one, monitored in year two, and finalized in year three.

The first step, to designate a permanent location for the workplace classes, was successfully achieved as four of the companies built a new room for educational purposes and the remaining four updated existing rooms. With these classrooms, the grant staff was then able to work on the next step by assisting in the creation of a resource library. The library includes multiple copies of appropriate textbooks for workplace literacy classroom and independent study, dictionaries, reading materials, software programs, and NWLP curricula and manuals.

Each company was encouraged to update and/or purchase at least one multimedia computer system in order to have an alternative method of instruction. With the advent of computer technology permeating every aspect of company operations, it was apparent that computer-assisted instruction would serve to reinforce classroom instruction and enhance company operations. All but two of the companies have either committed to or established one to two computers for educational use. A manual, *Enhancing Instruction Through Technology*, was developed to integrate educational software programs into the workplace and adult basic skills curriculum and instruction. This allows for self-directed as well as classroom learning.

Throughout the third year, at the Business Partner Advisory Meetings, discussions were held as to possible options and processes for implementation of continuing workplace education programs and opportunities. The companies have come to more strongly realize the value of education and its necessity to continue with some type of education.

Seven of the eight business partners have indicated their continuation of instructional programs beyond the funding cycle through various committments, as shown in the accompanying chart. (***Continuation of Basic Skills Instruction***)

Continuation of Basic Skills Education

Secretary of State (SOS) Workplace Literacy Grants

Two companies have applied for, with NWLP assistance, and received one year grants to conduct workplace literacy classes, create appropriate curriculum, and establish company advisory committees for educational decisions and support.

Department of Commerce and Community Affairs Grants

Two companies are in the process of applying for this grant which will give partial financial support for workplace basic skills classes that are necessary in order to conduct company training and implement new company programs,such as ISO 9000.

Contractual Basic Skills Classes

Five of the companies are currently involved in, or are working on plans for, contracts with the College of Lake County or other educational institutions for providing workplace basic skills classes. The classes range from ESL, computer-based instruction, math, problem solving, to Adult Basic Education.

Computer-Assisted Basic Skills Instruction

Three of the companies have created multimedia computer labs to provide basic skills enhancement through educational software. Three more companies have placed a computer in the classroom for similiar educational purposes.

Resource Library

Six of the companies have established a classroom library that contain textbooks with answer keys for independent learning, various dictionaries for reference, materials and books to improve reading skills.